Ecosystem Workforce Program

BRIEFING PAPER NUMBER 67

SPRING 2016

THE RIGHT RESOURCES AT THE RIGHT TIME: PRIVATE FIRE SUPPRESSION CONTRACTING CAPACITY IN THE WEST

CASSANDRA MOSELEY AND HEIDI HUBER-STEARNS

As wildfire has grown, a central challenge has been to develop systems to ensure that suppression resources are in the right place at the right time. As federal agencies increasingly depend on private contracting resources, it is important to understand how private sector fire suppression capacity compares to demand and where suppression businesses are located, particularly in relation to wildfire.

Approach

We compiled information from the Virtual Incident Procurement system about federal preseason equipment agreements in the West as of December 2015. We then examined data from the Resource Ordering and Status System to understand where engines were dispatched in the Northwest Geographic Area (GA).

Results

The federal interagency fire system divides the country into GAs, each with a Geographic Area Coordinating Center (GACC). In each GA, a number of dispatch centers fill resource orders with equipment located in their geography. If they lack local resources, they request resources from their GACC, which are filled by other dispatch centers in the GA or, when none are available, from outside the GA.

Resource distribution is uneven. In 2015, the seven western GAs contained preseason agreements for 9,396 individual resources. Resources ranged from dozers, water tenders, and engines to fallers and hand washing stations. Equipment is concentrated in particular GAs. The Northwest and Northern California together had half of all resources in the West (see Figure 1). Within GAs, resources tended to concentrate around the dispatch centers.

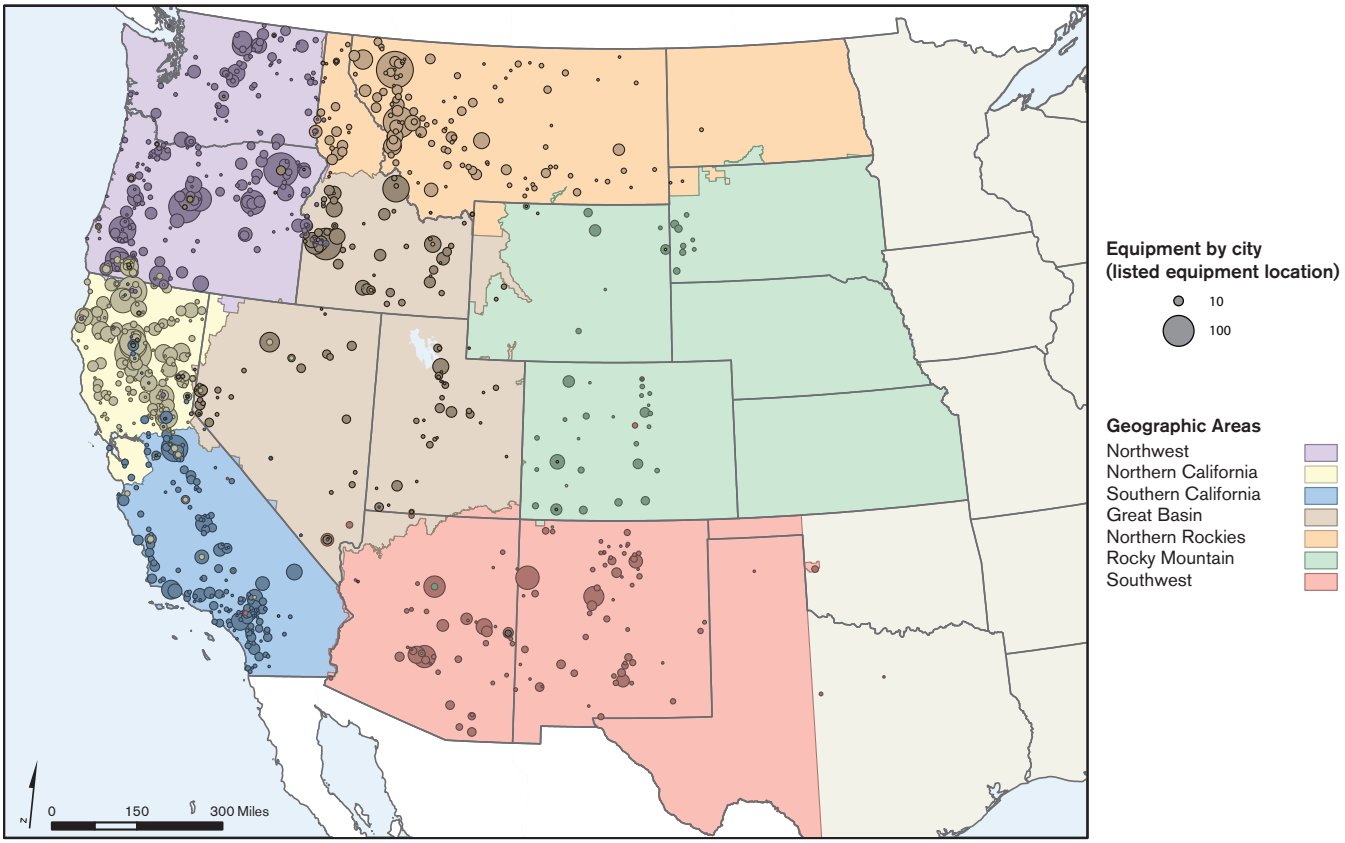
These spatial arrangements suggest that contractors are not focused simply on locating close to where they believe fires will occur. Although we did not analyze what drives this distribution, comparing these results with prior research suggests that, at a west-wide scale, fire suppression contractors may be spatially correlated with federal forest management contracting capacity. At smaller geographic scales, rules that require businesses to locate equipment close to dispatch center may be influencing business decisions.

Dispatch centers share resources regularly. Given the distribution of resources across the West, efficient resource sharing of resources is vital. Looking at engine contracting in the Northwest GA, we found that equipment sharing both within the GA and with other GAs was common. Of the engines ordered in 2015, 56% went from one dispatch center to another within the GA and 9% of orders went out of the GA. Some dispatch centers had

UNIVERSITY OF OREGON

INSTITUTE FOR A SUSTAINABLE ENVIRONMENT
5247 University of Oregon
Eugene OR 97403-5247
T 541-346-4545 **F** 541-346-2040
ewp@uoregon.edu ▪ ewp.uoregon.edu

Figure 1 Equipment under preseason agreements, 2015



many engines and tended to consistently provide to dispatch centers with few engines, while others tended to lend and borrow resources at about the same rate.

Peak demand for Northwest engines is below capacity. In the current system, all equipment that meets specifications is placed on dispatch priority lists in a particular dispatch center. In 2015, a large fire season in the Northwest, 11% of engines never went out on a fire. We do not know if these resources were never requested, or if they were unavailable for other reasons. During the peak days of the season in mid-August, only 71% engines were on fires.

Implications

One might expect contractors to locate their resources primarily based on where fires have tended to occur. But, the erratic nature of wildfire work instead may drive companies to locate where there is work available during the non-fire season. The Forest Service could create incentives for contractors to move closer to common fire locations to reduce travel costs, but significant analysis would be needed to understand the possible effects on costs and resource availability if businesses were to move further from sources of off-season work.

The finding that there is more than adequate engine capacity in the Northwest, even in the largest of fire years, raises questions about whether capping the number of engines under contract might lower costs by increasing the amount that each engine is used annually. This would need to be balanced by analysis of the number of resources that could be needed in the worst fire years after government and cooperator resources are exhausted.

More information

For additional information about this research:

http://ewp.uoregon.edu/managingthemarket

Katie Lyon, Chris Bone, Chris Mulverhill, and Nathan Mosurinjohn contributed to the analysis for this research. This research was supported by funding from the Joint Fire Science Program. Photo credit: US Forest Service, Coconino National Forest.